

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2007; month=11; day=23; hr=14; min=12; sec=12; ms=317;
]

=====

Application No: 10699035 Version No: 4.0

Input Set:

Output Set:

Started: 2007-10-31 22:08:01.693
Finished: 2007-10-31 22:08:03.599
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 906 ms
Total Warnings: 19
Total Errors: 0
No. of SeqIDs Defined: 41
Actual SeqID Count: 41

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (22)
W 402	Undefined organism found in <213> in SEQ ID (23)
W 402	Undefined organism found in <213> in SEQ ID (25)
W 402	Undefined organism found in <213> in SEQ ID (31)
W 402	Undefined organism found in <213> in SEQ ID (32)
W 402	Undefined organism found in <213> in SEQ ID (33)
W 402	Undefined organism found in <213> in SEQ ID (36)
W 402	Undefined organism found in <213> in SEQ ID (38)
W 402	Undefined organism found in <213> in SEQ ID (40)

SEQUENCE LISTING

<110> BATEMAN, JOHN
FITZGERALD, DAVID

<120> A MOLECULAR MARKER

<130> 071838.0142

<140> 10699035
<141> 2003-10-31

<150> PCT/AU02/00542

<151> 2002-05-02

<150> AU PR4701/01

<151> 2001-05-02

<160> 41

<170> PatentIn Ver. 3.3

<210> 1
<211> 537
<212> DNA
<213> Homo sapiens

<400> 1
ggggacctga tgttcctgct ggacagctca gccagcgtct ctcactacga gttctccgg 60
gttcgggagt ttgtgggca gctggtggtt ccactgcccc tgggcaccgg ggccctgcgt 120
gccagtctgg tgcacgtggg cagtcggcca tacaccgagt tcccttcgg ccagcacagc 180
tcgggtgagg ctgcccaggta tgcggtgcgt gcttctgccc agcgcatggg tgacaccac 240
actggcctgg cgctggtcta tgccaaggaa cagctgtttg ctgaagcatac aggtgcccgg 300
ccaggggtgc ccaaagtgcg ggtgtgggtg acagatggcg gctccagcga ccctgtgggc 360
ccccccatgc aggagctcaa ggacctgggc gtcaccgtgt tcattgtcag caccggccga 420
ggcaacttcc tggagctgtc agccgctgcc tcagccctg ccgagaagca cctgcacttt 480
gtggacgtgg atgacactgca catcattgtc caagagctga ggggctccat tctcgcg 537

<210> 2
<211> 180
<212> PRT
<213> Homo sapiens

<400> 2
Arg Gly Asp Leu Met Phe Leu Leu Asp Ser Ser Ala Ser Val Ser His
1 5 10 15

Tyr Glu Phe Ser Arg Val Arg Glu Phe Val Gly Gln Leu Val Ala Pro
20 25 30

Leu Pro Leu Gly Thr Gly Ala Leu Arg Ala Ser Leu Val His Val Gly
35 40 45

Ser Arg Pro Tyr Thr Glu Phe Pro Phe Gly Gln His Ser Ser Gly Glu
50 55 60

Ala Ala Gln Asp Ala Val Arg Ala Ser Ala Gln Arg Met Gly Asp Thr
 65 70 75 80

 His Thr Gly Leu Ala Leu Val Tyr Ala Lys Glu Gln Leu Phe Ala Glu
 85 90 95

 Ala Ser Gly Ala Arg Pro Gly Val Pro Lys Val Leu Val Trp Val Thr
 100 105 110

 Asp Gly Gly Ser Ser Asp Pro Val Gly Pro Pro Met Gln Glu Leu Lys
 115 120 125

 Asp Leu Gly Val Thr Val Phe Ile Val Ser Thr Gly Arg Gly Asn Phe
 130 135 140

 Leu Glu Leu Ser Ala Ala Ala Ser Ala Pro Ala Glu Lys His Leu His
 145 150 155 160

 Phe Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu Arg Gly
 165 170 175

 Ser Ile Leu Asp
 180

<210> 3
 <211> 1266
 <212> DNA
 <213> Mus musculus

<400> 3
 atgctgttct ggactgcgtt cagcatggct ttgagttctgc gggttggcatt ggcgcggagc 60
 agcatagagc gcggttccac agcatcagac ccccaggggg acctgttgtt cctgttggac 120
 agctcagcca gcgtgtcaca ctatgagttc tcaagagttc gggaaatttg ggggcagctg 180
 gtggctacga tgtcttccgg acccggggct ctgcgtgcta gtctggtgca cgtggggcagc 240
 cagcctcaca cagagtttac ttttggaccag tacagttcag gccaggctat acgggatgcc 300
 atccgtgttg caccccaacg tatgggtgat accaacacag gcctggact ggcttatgcc 360
 aaagaacaat tgtttgctga ggaaggcagg gcccggccag ggttcccaa ggtgctggtg 420
 tgggtgacag atgggtggctc cagcgacccc gtggggccccc ctatgcagga gctcaaggac 480
 ctgggtgtca ccatcttcat tgtcagcact ggcgcaggca acctgttggta gctgttggca 540
 gtcgcctcgg ctccctgccga gaagcaccta cactttgtgg atgtggatga tcttcctatc 600
 attgccccggg agctgcgggg ctccataact gatgcgtatgc agccacaaca gcttcatgcc 660
 tcggagggttc tgtccagtgg ctccgcctg tcctggccgc ccctgctgac agcggactct 720
 gtttactacg tgctggaatt ggtacctacg ggcaaaactgg caaccacaag acgccaacag 780
 ctgccccggga atgctaccag ctggacctgg acagatctcg acccggacac agactatgaa 840
 gtatcactgc tgcctgagtc caacgtgcac ctccctgaggc cgacgcacgt gcgagtacgc 900
 acactgcaag aggaggccgg gcccagaacgc atcgtcatct cgcatgcgag gcccgcgcagc 960
 ctccgcgtaa gctggccccc cgcgcttggc ccggactccg ctctcggcta ccatgtacag 1020
 ctccggaccc tgcaggccgg gtcccttagag cgctgtggagg tgccagcagg ccagaacagc 1080
 actaccgtcc agggcctgac gcccctgcacc acttacctgg tgactgtgac tgccgccttc 1140
 cgctccggcc gccagaggcc gctgtcggt aaggcctgtta cggccctctgg cgccgcggacc 1200
 cgtgtccgc agtccatgcg gcccggaggct ggaccgcggg agccctgaac tgcctgcctg 1260
 ctcgtc 1266

<210> 4
 <211> 415

<212> PRT

<213> Mus musculus

<400> 4

Met Leu Phe Trp Thr Ala Phe Ser Met Ala Leu Ser Leu Arg Leu Ala
1 5 10 15

Leu Ala Arg Ser Ser Ile Glu Arg Gly Ser Thr Ala Ser Asp Pro Gln
20 25 30

Gly Asp Leu Leu Phe Leu Leu Asp Ser Ser Ala Ser Val Ser His Tyr
35 40 45

Glu Phe Ser Arg Val Arg Glu Phe Val Gly Gln Leu Val Ala Thr Met
50 55 60

Ser Phe Gly Pro Gly Ala Leu Arg Ala Ser Leu Val His Val Gly Ser
65 70 75 80

Gln Pro His Thr Glu Phe Thr Phe Asp Gln Tyr Ser Ser Gly Gln Ala
85 90 95

Ile Arg Asp Ala Ile Arg Val Ala Pro Gln Arg Met Gly Asp Thr Asn
100 105 110

Thr Gly Leu Ala Leu Ala Tyr Ala Lys Glu Gln Leu Phe Ala Glu Glu
115 120 125

Ala Gly Ala Arg Pro Gly Val Pro Lys Val Leu Val Trp Val Thr Asp
130 135 140

Gly Gly Ser Ser Asp Pro Val Gly Pro Pro Met Gln Glu Leu Lys Asp
145 150 155 160

Leu Gly Val Thr Ile Phe Ile Val Ser Thr Gly Arg Gly Asn Leu Leu
165 170 175

Glu Leu Leu Ala Ala Ala Ser Ala Pro Ala Glu Lys His Leu His Phe
180 185 190

Val Asp Val Asp Asp Leu Pro Ile Ile Ala Arg Glu Leu Arg Gly Ser
195 200 205

Ile Thr Asp Ala Met Gln Pro Gln Gln Leu His Ala Ser Glu Val Leu
210 215 220

Ser Ser Gly Phe Arg Leu Ser Trp Pro Pro Leu Leu Thr Ala Asp Ser
225 230 235 240

Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Gly Lys Leu Ala Thr Thr
245 250 255

Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Ser Trp Thr Trp Thr Asp
260 265 270

Leu Asp Pro Asp Thr Asp Tyr Glu Val Ser Leu Leu Pro Glu Ser Asn
275 280 285

Val His Leu Leu Arg Pro Gln His Val Arg Val Arg Thr Leu Gln Glu		
290	295	300
Glu Ala Gly Pro Glu Arg Ile Val Ile Ser His Ala Arg Pro Arg Ser		
305	310	315
Leu Arg Val Ser Trp Ala Pro Ala Leu Gly Pro Asp Ser Ala Leu Gly		
325	330	335
Tyr His Val Gln Leu Gly Pro Leu Gln Gly Ser Leu Glu Arg Val		
340	345	350
Glu Val Pro Ala Gly Gln Asn Ser Thr Thr Val Gln Gly Leu Thr Pro		
355	360	365
Cys Thr Thr Tyr Leu Val Thr Val Thr Ala Ala Phe Arg Ser Gly Arg		
370	375	380
Gln Arg Ala Leu Ser Ala Lys Ala Cys Thr Ala Ser Gly Ala Arg Thr		
385	390	395
Arg Ala Pro Gln Ser Met Arg Pro Glu Ala Gly Pro Arg Glu Pro		
405	410	415

<210> 5
 <211> 1257
 <212> DNA
 <213> Homo sapiens

<400> 5

```

atgctccctt ggacggcgctt cggcctggcc ctgagcttgc ggctggcgctt ggcgcggagc 60
ggcgcggagc gcggtccacc agcatcagcc ccccgagggg acctgatgtt cctgtctggac 120
agctcagcca gcgtctctca ctacgagttc tcccggttcc gggagtttgtt ggggcagctg 180
gtggctccac tggcccttggg caccggggcc ctgcgtccca gtctggtgca cgtggggcagt 240
cggccataca ccgagttccc cttcgcccaag cacagctcgg gtgaggctgc ccaggatgctg 300
gtgcgtgctt ctgcccagcg catgggtgac acccacactg gcctggcgctt ggtctatgcc 360
aaggaacagc tgtttgctga agcatcaggt gcccggccag gggtgcccaa agtgctggtg 420
tgggtgacag atggccggctc cagcgaccctt gtggggccccc ccatgcagga gctcaaggac 480
ctggggcgtca ccgtgttcat tgcgttgcacc ggccgaggca acttccttggac gctgtcagcc 540
gctgccttccat cccctgtccca gaagcacctg cactttgtgg acgtggatgac cctgcacatc 600
attgtccaaag agctgaggggg ctccatttctc gaygcgttgc ggccgcagca gctccatgcc 660
acggagatca cgtccagcggtt cttccgccttgc gcctggccac ccctgttgcac cgcagactcg 720
ggctactatg tgctggagctt ggtgcccagc gcccagccgg gggctgcaag acgcccagcag 780
ctgcccaggaa acgcccacggaa ctggatcttgc gcccggcccttgc accccggacac ggactacgac 840
gtggcgcttag tgccttggatc caacgttgcgc cttcttggac cccagatcttgc gcccggccgc 900
acgccccccaggaggaggccgg gcccagacgc atcgatcttgc cccacggcccg gcccggccagc 960
ctccggcgatc gttggggccccc agcgctgggc tcagccggccgc cgcgttgcac ccacgttgc 1020
ttcggggccgc tgcggggccgg ggaggccgcag cgggtggagg tggccggccgg cccggcccttgc 1080
accacgttgc accggcttgc gcccggccacc gcctacttgc tgaccgttgc cggccggcccttgc 1140
cgctcgccggcc gcgagacgcgc gctgtccgc aaggccgttgc cggccggacgg cccggccccc 1200
cgccccacggcc cctgttgcggcc cggccggaccgc cccggggaccgc ccagccgttgc gcccgttgc 1257
  
```

<210> 6
 <211> 418
 <212> PRT

<213> Homo sapiens

<400> 6

Met Leu Pro Trp Thr Ala Leu Gly Leu Ala Leu Ser Leu Arg Leu Ala
1 5 10 15

Leu Ala Arg Ser Gly Ala Glu Arg Gly Pro Pro Ala Ser Ala Pro Arg
20 25 30

Gly Asp Leu Met Phe Leu Leu Asp Ser Ser Ala Ser Val Ser His Tyr
35 40 45

Glu Phe Ser Arg Val Arg Glu Phe Val Gly Gln Leu Val Ala Pro Leu
50 55 60

Pro Leu Gly Thr Gly Ala Leu Arg Ala Ser Leu Val His Val Gly Ser
65 70 75 80

Arg Pro Tyr Thr Glu Phe Pro Phe Gly Gln His Ser Ser Gly Glu Ala
85 90 95

Ala Gln Asp Ala Val Arg Ala Ser Ala Gln Arg Met Gly Asp Thr His
100 105 110

Thr Gly Leu Ala Leu Val Tyr Ala Lys Glu Gln Leu Phe Ala Glu Ala
115 120 125

Ser Gly Ala Arg Pro Gly Val Pro Lys Val Leu Val Trp Val Thr Asp
130 135 140

Gly Gly Ser Ser Asp Pro Val Gly Pro Pro Met Gln Glu Leu Lys Asp
145 150 155 160

Leu Gly Val Thr Val Phe Ile Val Ser Thr Gly Arg Gly Asn Phe Leu
165 170 175

Glu Leu Ser Ala Ala Ala Ser Ala Pro Ala Glu Lys His Leu His Phe
180 185 190

Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu Arg Gly Ser
195 200 205

Ile Leu Asp Ala Met Arg Pro Gln Gln Leu His Ala Thr Glu Ile Thr
210 215 220

Ser Ser Gly Phe Arg Leu Ala Trp Pro Pro Leu Leu Thr Ala Asp Ser
225 230 235 240

Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Ala Gln Pro Gly Ala Ala
245 250 255

Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Asp Trp Ile Trp Ala Gly
260 265 270

Leu Asp Pro Asp Thr Asp Tyr Asp Val Ala Leu Val Pro Glu Ser Asn
275 280 285

Val Arg Leu Leu Arg Pro Gln Ile Leu Arg Val Arg Thr Arg Pro Glu
290 295 300

Glu Ala Gly Pro Glu Arg Ile Val Ile Ser His Ala Arg Pro Arg Ser
305 310 315 320

Leu Arg Val Ser Trp Ala Pro Ala Leu Gly Ser Ala Ala Ala Leu Gly
325 330 335

Tyr His Val Gln Phe Gly Pro Leu Arg Gly Gly Glu Ala Gln Arg Val
340 345 350

Glu Val Pro Ala Gly Arg Asn Cys Thr Thr Leu Gln Gly Leu Ala Pro
355 360 365

Gly Thr Ala Tyr Leu Val Thr Val Thr Ala Ala Phe Arg Ser Gly Arg
370 375 380

Glu Ser Ala Leu Ser Ala Lys Ala Cys Thr Pro Asp Gly Pro Arg Pro
385 390 395 400

Arg Pro Arg Pro Val Pro Arg Ala Pro Thr Pro Gly Thr Ala Ser Arg
405 410 415

Glu Pro

<210> 7
<211> 539
<212> DNA
<213> Mus musculus

<400> 7
ggggggacct gttgttcctg ttggacagct cagccagcgt gtcacactat gagttctcaa 60
gagttcggga atttgtgggg cagctgggtgg ctacgtgtc tttcggaccc ggggctctgc 120
gtgctagtct ggtgcacgtg ggcagccagc ctcacacaga gtttactttt gaccagtaca 180
gttcaggcca ggctatacgg gatgccatcc gtgtgcacc ccaacgtatg ggtgatacca 240
acacagggcct ggcactggct tatgccaaag aacaattgtt tgctgaggaa gcaggtgccc 300
ggccagggggt tcccaaggtg ctgggtgtgg tgacagatgg tggctccagc gaccccggtgg 360
gccccccat gcaggagctc aaggacctgg gtgtcaccat cttcattgtc agcactggcc 420
gaggcaacacct gttggagctg ttggcagctg cctcggctcc tgccgagaag cacctacact 480
ttgtggatgt ggatgatctt cctatcattt cccggggagct gccccggctcc ataactgtat 539

<210> 8
<211> 180
<212> PRT
<213> Mus musculus

<400> 8
Gln Gly Asp Leu Leu Phe Leu Leu Asp Ser Ser Ala Ser Val Ser His
1 5 10 15

Tyr Glu Phe Ser Arg Val Arg Glu Phe Val Gly Gln Leu Val Ala Thr
20 25 30

Met Ser Phe Gly Pro Gly Ala Leu Arg Ala Ser Leu Val His Val Gly

35

40

45

Ser Gln Pro His Thr Glu Phe Thr Phe Asp Gln Tyr Ser Ser Gly Gln
50 55 60

Ala Ile Arg Asp Ala Ile Arg Val Ala Pro Gln Arg Met Gly Asp Thr
65 70 75 80

Asn Thr Gly Leu Ala Leu Ala Tyr Ala Lys Glu Gln Leu Phe Ala Glu
85 90 95

Glu Ala Gly Ala Arg Pro Gly Val Pro Lys Val Leu Val Trp Val Thr
100 105 110

Asp Gly Gly Ser Ser Asp Pro Val Gly Pro Pro Met Gln Glu Leu Lys
115 120 125

Asp Leu Gly Val Thr Ile Phe Ile Val Ser Thr Gly Arg Gly Asn Leu
130 135 140

Leu Glu Leu Leu Ala Ala Ala Ser Ala Pro Ala Glu Lys His Leu His
145 150 155 160

Phe Val Asp Val Asp Asp Leu Pro Ile Ile Ala Arg Glu Leu Arg Gly
165 170 175

Ser Ile Thr Asp
180

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 9

ctcaaagcca tgcgtagtc 20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 10

agaacgcata gtcatctcgc 20

<210> 11

<211> 20

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 11
agaacgcac gtcatctcg 20

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 12
tcaaggccat atccaaacaac 20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 13
ctggtcatcg ccgccttgc 20

<210> 14
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 14
gaccagcggt aattccttgc 22

<210> 15
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 15
ccgggtttcc cggaagt 17

<210> 16
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 16
ttactggcaa catcaacagg actcctcgta tt 32

<210> 17
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 17
ccacaggact agaacacacctg ctaa 24

<210> 18
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 18
cctaagatga gcgcaagttg aa 22

<210> 19
<211> 9060
<212> DNA
<213> Homo sapiens

<400> 19
cctctgcatt ccagccacct gccctggcc cagctccaaa ggaagggggc ccaagcttc 60
tgaataaaag gtgcacatga ggaccaagga ggcctgacac tgggagggga cagctccacc 120
tcctctcccc ggacacccca aaaggcggag acgttcacaa gctgtcctgt cggcggctgc 180
tgtttgtgga ggagtaaagc atcctagcga gactgcaggc tcggtgtaca tctgattac 240
tgaattttaa agtctggat gtttagtgggg aagaggcggag gtgagcattg cgtgacgccc 300
aggacttaggc gggcggggga ctgcacctgg cta